EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANIZATION
ORGANISATION EUROPEENNE ET MEDITERRANEENNE POUR LA PROTECTION DES PLANTES
Summary sheet of validation data for a diagnostic test

The EPPO Standard PM 7/98 *Specific requirements for laboratories preparing accreditation for a plant pest diagnostic activity* describes how validation should be conducted. It also includes definitions of performance criteria.

Laboratory contact details	ILVO Institute for Agricultural and Fisheries Research Burg. Van Gansberghelaan 96, 9820 Merelbeke - Melle, Belgium
Short description of the test	Identification of Meloidogyne graminicola by molecular conventional PCR Bellafiore et al. 2015 in juveniles
Date, reference of the validation report	2023-10-31 - Validation report for the molecular identification of Meloidogyne graminicola
Link to other validation data	- Validation report for the molecular identification of Meloidogyne graminicola Identification of Meloidogyne graminicola by molecular real time PCR Htay et al., 2016 in juveniles - Validation report for the molecular identification of Meloidogyne graminicola Identification of Meloidogyne graminicola by molecular conventional PCR Mattos et al., 2019 (M. oryzae primers) in juveniles - TEST PERFORMANCE STUDY REPORT 22MG Identification of Meloidogyne graminicola by molecular conventional PCR Bellafiore et al. 2015 in juveniles - Validation report for the molecular identification of Meloidogyne graminicola Identification of Meloidogyne graminicola by molecular conventional PCR Htay et al., 2016 in juveniles - TEST PERFORMANCE STUDY REPORT 22MG Identification of Meloidogyne graminicola by molecular conventional PCR Htay et al 2016 in juveniles - Validation report for the molecular identification of Meloidogyne graminicola Identification of Meloidogyne graminicola by molecular conventional PCR Mattos et al., 2019 (M. graminicola primers) in juveniles - Validation report for the molecular identification of Meloidogyne graminicola Identification of Meloidogyne graminicola by molecular conventional PCR He et al., 2021 in juveniles - Validation report for the molecular identification of Meloidogyne graminicola Identification of Meloidogyne graminicola by molecular real time PCR He et al., 2021 in juveniles
Validation process according to EPPO Standard PM7/98?	yes
Is the lab accredited for this test?	no
Was the validated data generated in the framework of a project?	EURL

If yes, please specify	EU-funded project EURLs-EURCs 2021-2022 (grant SI2.870859)
Description of the test	
Organism(s)	Meloidogyne graminicola (MELGGC)
Detection / identification	identification
Method(s)	Molecular Extraction DNA RNA Molecular Conventional PCR
Method: Molecular Extraction DNA RNA	
Reference of the test description	
New test being considered for inclusion in the next version of the EPPO diagnostic protocol?	yes
Kit	
Is a kit used	no
Other information	
Other details on the test	Based on the use of Worm lysis buffer (see details in the report). Final volume 50, 10 and 5 microliter evaluated.
Method: Molecular Conventional PCR	
Reference of the test description	
As or adapted from an EPPO diagnostic protocol	no
New test being considered for inclusion in the next version of the EPPO diagnostic protocol?	yes
As or adapted from an IPPC diagnostic protocol	no
Reference of the test	Bellafiore et al. 2015
Kit	
Is a kit used	no
Other information	
Reaction type	Simplex
Are the performance characteristics included in the EPPO diagnostic protocol?	**no**
Performance Criteria :	
Organism 1.:	**Meloidogyne graminicola(MELGGC)**
Analytical sensitivity	
What is smallest amount of target that can be detected reliably?	10 nematodes when extracted in 50 µl WLB 2 nematodes when extracted in 10 µl WLB 1 nematode when extracted in 5 µl WLB

Analytical specificity - inclusivity	
Number of strains/populations of target organisms tested	Population from Brazil, Italy and the Philippines amplified (10 J2)
Specificity value	100%
Analytical specificity - exclusivity	
Number of non-target organisms tested	M. naasi and M Oryzae (10 J2)
Specificity value	
Cross reacts with	Meloidogyne oryzae
Repeatability	
Provide the calculated % of agreement for a given level of the pest (see PM 7/98)	100% at the limit of detection indicated above on 2 to 10 replicates
Test performance study	
Test performance study?	no
Other information	
Any other information considered useful	Report available on the EURL website for EU NRLs or available on request to the EURL

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